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From: Rebecca Clayton Admin. Assistant to Stephen J. Walder, Jr.	No. of Pages Including Cover Sheet: 22
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Serial No. 09/838,420; Attorney Docket No. FR920000032US1	
Date: Tuesday, May 17, 2005	

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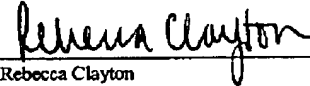
## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Bauchot et al.**Serial No.: **09/838,420**Filed: **April 19, 2001****For: Method and System in an  
Electronic Spreadsheet for Managing  
and Handling User-Defined Options****50170**

PATENT TRADEMARK OFFICE

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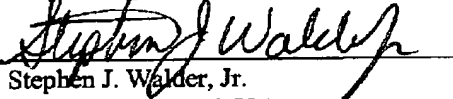
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ENCLOSED HEREWITH:

- Appellants' Brief (37 C.F.R. § 41.37)

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Respectfully submitted,



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PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Bauchot et al.**Serial No. **09/838,420**Filed: **April 19, 2001**For: **Method and System in an  
Electronic Spreadsheet for Managing  
and Handling User-Defined Options**§ Group Art Unit: **2176**  
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§ Examiner: **Stevens, Robert**  
§  
§ Customer No. **50170**  
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§  
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By:

  
Rebecca ClaytonCommissioner for Patents  
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Alexandria, VA 22313-1450

ATTENTION: Board of Patent Appeals and Interferences

## APPELLANTS' BRIEF (37 C.F.R. § 41.37)

This Appeal Brief is in furtherance of the Notice of Appeal filed April 26, 2005 (37 C.F.R. § 41.31).

The fees required under § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying Transmittal of Appeal Brief.

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**I. Real Party in Interest**

The real party in interest in this appeal is the following party: International Business Machines Corporation.

**II. Related Appeals and Interferences**

With respect to other appeals and interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

**III. Status of Claims**

The status of the claims involved in this proceeding is as follows:

1. Claims canceled: NONE
2. Claims withdrawing from consideration but not canceled: NONE
3. Claims pending: 1-11
4. Claims allowed: NONE
5. Claims rejected: 1-11

The claims on appeal are: 1-11

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**IV. Status of Amendments**

An amendment after mailing of the Final Office Action was filed on March 17, 2005. The Advisory Action mailed April 8, 2005 indicates that this amendment will be entered for purposes of appeal. Thus, the status of the claims is as amended in the March 17, 2005 amendment.

**V. Summary of Claimed Subject Matter**

The present invention is directed to the field of information processing by digital computers, and more specifically to a method and system of processing user defined Boolean variables in a multi-dimensional spreadsheet (200) comprising a plurality of cells identified by a cell address along each dimension. The method of one embodiment of the present invention includes defining one or a plurality of Boolean variables in a table (400), whereby said Boolean variables are managed. The one or plurality of Boolean variables may be referenced in one or a plurality of cells of the spreadsheet and the content of the cell or plurality of cells may be determined based on whether the one or plurality of Boolean variables are activated or not in the table (page 5, lines 4-16). Each of the Boolean variables can be set as "True" or "False" and their setting impacts the content of a cell within an electronic spreadsheet (page 13, lines 25-29). In determining the content of a cell or plurality of cells of the spreadsheet, the value of the cell may be computed according to the value of the one or plurality of Boolean variables (an example is described at page 18, lines 9-31).

In addition, the defining of one or a plurality of Boolean variables in a table may further include, for each defined Boolean variable, assigning a name (311) and storing in the table (400) the name (403), selecting a status value (303), and storing the status value (404) in the table (400) (page 15, lines 23-25). Moreover, the mechanism of the present invention may further include changing, in the table (400), the name (311) of one or a plurality of Boolean variables (page 15, lines 23-25). The mechanism of the exemplary embodiments of the present invention may further include updating, in the table (400), the status value (304, 404) of the one or plurality of Boolean variables.

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With one exemplary embodiment of the present invention, selecting a status value (303) may include setting the status value of the Boolean variable to "true" or setting the status value of the Boolean variables to "false" (page 17, lines 18-21). In another exemplary embodiment of the present invention, the value of the Boolean variable may be set to one when the status value is "true" or to zero when the status value is "false" (page 18, lines 4-9).

The assigning of a name, changing the name, selecting a status value, and updating the status value may be executed by means of an interactive user interface (300, 310). The interactive user interface may include a dialog box (300) displayed on a screen (106) of a computer system (100).

In one exemplary embodiment of the present invention, a computer system (100) is provided having means (101 and 102 and/or 107 having instructions associated with element 152) for defining one or a plurality of Boolean variables in a table (400), whereby Boolean variables are managed. In addition, the computer system (100) may further include means (101 and 102 and/or 107 having instructions associated with element 152) for referencing the one or plurality of Boolean variables in one or a plurality of cells, and means (101) for determining the content of the cell or plurality of cells. Moreover, in one exemplary embodiment of the present invention, a computer-useable medium (e.g., mass storage 107, main memory 102, or media accessible via I/O controller 103) comprising computer readable instructions (152) adapted for carrying out the methodology of the present invention is provided.

## **VI. Grounds of Rejection to be Reviewed on Appeal**

The grounds of rejection to be reviewed on appeal are as follows:

(1) Claim 11 stands rejected under 35 U.S.C. § 112, second paragraph as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention;

(2) Claim 11 stands rejected under 35 U.S.C. § 101 as being allegedly directed to non-statutory subject matter; and

(3) Claims 1-11 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Kelly, Using Microsoft Excel 97, 3<sup>rd</sup> Edition, Que Corp., Indianapolis, IN, 1998, pages 138-

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144 and 154-189 in view of Deitel et al., C++: How to Program, 2<sup>nd</sup> Edition, Prentice Hall, Upper Saddle River, NJ, 1994, pages 10, 106-110, 147, 243-244, 256-262, 448, 473-479, 483-485, 707-730, 981-987 and 1043-1045, and further in view of the Microsoft Computer Dictionary, 4<sup>th</sup> Edition, Microsoft Press, Redmond, WA, 1999, pages 29, 56-58, 79, 229, 272, 420 and 434.

## VII. Argument

### A. Rejections of Claim 11 under 35 U.S.C § 112, Second Paragraph

The Final Office Action rejects claim 11 under 35 U.S.C. § 112, second paragraph alleging that the term “computer-useable medium” is indefinite because it is not defined in the specification. This rejection is respectfully traversed.

Appellants respectfully submit that the terms in the claims must be examined in light of the level of one of ordinary skill in the art and are not to be examined in a vacuum. Those of ordinary skill in the art are well aware of what a “computer-useable medium” is and it is not necessary to provide a specific definition of this term in the specification for this term to be definite. As is known to those of ordinary skill in the art, a computer-useable medium is any medium that is capable of carrying data and/or instructions that are readable by a computing device. Examples of such computer-useable medium include floppy disks, hard disks, magnetic tape, CD-ROMs, DVD-ROMs, carrier waves, transmission media, and the like. While this term may be broad, it is definite since one of ordinary skill in the art can clearly determine what types of media fall within the scope of the term “computer-useable medium.”

In response to this argument, during a March 14, 2005 telephone interview with Examiners Stevens and Shah, the Examiners merely stated that the specification must include a definition of these terms in order for the use of these terms in the claims to be definite. The Examiners stated that the concern is with regard to whether such terms include transmission or carrier wave media.

Appellants respectfully submit that such a position completely disregards the level of one of ordinary skill in the art and instead examines the claims in a vacuum. This is clearly an erroneous approach to examination since it is stated in many places within the MPEP that the

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Examiner must examine the application in light of one of ordinary skill in the art. For example, Appellants have not defined what a "computer" is, what a "table" is, or what a "cell" of a spreadsheet is, yet one of ordinary skill in the art would understand the usage of these terms and the scope associated with these terms even though the Appellants have not presented a formal definition of these terms in the specification. The Examiner has not asserted that these terms are indefinite because one of ordinary skill in the art understands what these terms mean and what their scope is. Similarly, the terms "computer readable medium" and "computer useable medium" are well known to those of ordinary skill in the art. The MPEP even uses such terms as exemplary of claim language directed to statutory subject matter.

Whether or not the terms "computer readable medium" or "computer useable medium" encompasses carrier waves or transmission medium is irrelevant to a determination as to whether the terms are definite or not. Such considerations are directed to the breadth of the claim language, not to the definiteness of the claim language. Moreover, nowhere in the MPEP is there any statement that claim language directed to carrier waves or transmission medium is indefinite or defines non-statutory subject matter.

The Examiners stated that such language that encompasses carrier waves or transmission medium is considered indefinite because carrier waves and transmission media are not physical elements. Appellants respectfully disagree. Carrier waves and transmission media are physical media. While they are not immediately perceivable by the human eye, they are physical. Moreover, there is no basis in the MPEP for holding terminology indefinite for lack of physicality. In addition, there is no statement anywhere in the MPEP to the effect that carrier waves or transmission media are non-statutory. To the contrary, as set forth herein below, the MPEP clearly states that functional descriptive material in a computer readable media, which would encompass carrier waves and transmission media, is statutory.

The Examiners essentially made the same arguments when addressing the 35 U.S.C. § 101 rejection, as discussed hereafter, with regard to the computer readable and computer useable medium claims, e.g., claim 11. Moreover, when pressed to support such a position, the Examiners merely stated that the MPEP has been changed to not include the section, i.e. section 2106(IV)(B)(1), stating that computer readable medium are statutory, and that "the case law was changing." As a result, the Examiners stated that they were going to stand by their rejection. Such a position is improper because (1) the MPEP has not been changed and the applicable case

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law has not changed; and (2) it makes Appellants have to respond to supposed case law and supposed MPEP text that is not yet in existence.

Appellants have checked their own MPEP and the MPEP available from the Patent Office website and have verified that MPEP section 2106(IV)(B)(1) has not been changed as of the time of the Final Office Action and the filing of this Brief, to eliminate the portion stating that functional descriptive material in a computer readable medium is statutory. Nor are Appellants aware of any case law that overturns the holding in *In re Lowry*, referenced below and used as a basis in the MPEP. Thus, despite the Examiners' assurances that "things are changing," they have not in fact changed and the Examiners must examine the claims based on the status of the MPEP and case law at the time of the examination, not what the MPEP and case law might say in the future. If the Examiners have a basis for their position, they must clearly state what it is with particularity, rather than relying on supposed changes that may or may not be made in the future.

In view of the above, Appellants respectfully submit that claim 11 is not indefinite. Accordingly, Appellants respectfully request that the Board of Appeals and Interferences overturn the rejection of claim 11 under 35 U.S.C. § 112, second paragraph.

**B. Rejection of Claims 1-11 under 35 U.S.C. § 101**

The Final Office Action rejects claims 1-11 under 35 U.S.C. § 101 alleging that the claims are directed to non-statutory subject matter. The Advisory Action mailed April 8, 2005 states that the amendment filed March 17, 2005 overcomes "some of the 101 rejections (not claim 11)." From this statement, it is Appellants' understanding that the Examiner is in agreement that the 101 rejection of claims 1-10 has been overcome and that the only remaining rejection under 35 U.S.C. § 101 is the rejection of claim 11. Therefore, the following arguments will address only the rejection of claim 11 under 35 U.S.C. § 101. If Appellants' understanding is incorrect, then the rejection of claims 1-10 under 35 U.S.C. § 101 is overcome for the reasons stated in Appellants' Response to Final Office Action filed March 17, 2005.

Regarding claim 11, the Final Office Action alleges that this claim is directed to a "computer usable medium" which may encompass an intangible embodiment (such as a carrier wave or transmission media). Appellants respectfully submit that computer programs embodied in computer usable or computer readable medium have been held to be statutory and thus, the

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Final Office Action is in error. As stated in the MPEP at section 2106 (IV)(B)(1), "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized." As an example, in *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) a claim to a data structure stored on a computer readable medium that increases computer efficiency was held to be statutory.

In the present case, claim 11 recites a computer-usable medium comprising computer readable instructions adapted for defining one or a plurality of Boolean variables in a table, whereby the Boolean variables are managed, referencing a Boolean variable in a cell of the electronic spreadsheet, and determining the content of the cell or plurality of cells, wherein each of the Boolean variables can be set as "True" or "False," and impact the content of a cell within an electronic spreadsheet. Thus, the present invention as recited in claim 11 is directed to a computer usable medium comprising computer instructions which permit Boolean variables to be defined and managed in a table, which are referenced in cells of an electronic spreadsheet, and which affect the content of cells within the electronic spreadsheet. Moreover, the computer usable medium includes instructions for determining the content of the cells in the electronic spreadsheet. This is clearly directed to functional descriptive material embodied in a computer usable medium and thus, is statutory in accordance with the MPEP and the applicable case law.

The Examiner's concerns over whether the term "computer useable medium" includes carrier wave or transmission media is irrelevant to the issue. There is no basis in the MPEP or applicable case law for holding carrier wave or transmission media non-statutory. The MPEP does not draw a distinction between different types of "computer useable" or "computer readable" media that are statutory and other types of computer useable or computer readable media that are non-statutory. To the contrary, the MPEP clearly states that functional descriptive material, when recorded on "some," i.e. any, computer-readable medium will be statutory. The MPEP does not state that only functional descriptive material recorded on "tangible" computer-readable media are statutory or that "intangible" computer-readable media are non-statutory. This differentiation between different types of computer-readable or computer useable media is a completely new standard devised and adopted solely by the Examiner without any basis in the MPEP or applicable case law.

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Appellants are not required to satisfy the Examiner's own personal requirements for patentability, but the requirements set forth by law. Under the law, as outlined in the MPEP, functional descriptive material recorded on a computer useable medium or computer readable medium is statutory regardless of the particular computer useable medium, whether tangible or intangible. The stated purpose for holding functional descriptive material recorded on a computer useable medium to be statutory is because "use of technology permits the function of the descriptive material to be realized." This purpose is achieved regardless of whether the computer useable medium is tangible or not. Thus, whether or not the use of the term "computer useable medium" may encompass carrier wave or transmission media, the subject matter is statutory.

In view of the above, Appellants respectfully submit that all of the claims are directed to statutory subject matter. Accordingly, Appellants respectfully request that the Board of Patent Appeals and Interferences overturn the rejection of claim 11 under 35 U.S.C. § 101.

**C. Rejection of Claims 1-11 under 35 U.S.C. § 103(a)**

The Final Office Action rejects claims 1-11 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Kelly, Using Microsoft Excel 97, 3<sup>rd</sup> Edition, Que Corp., Indianapolis, IN, 1998 in view of Deitel et al., C++: How to Program, 2<sup>nd</sup> Edition, Prentice Hall, Upper Saddle River, NJ, 1994, and further in view of Microsoft Computer Dictionary, 4<sup>th</sup> Edition, Microsoft Press, Redmond, WA, 1999. This rejection is respectfully traversed.

Claim 1, which is representative of the other rejected independent claims 10 and 11 with regard to similarly recited subject matter, reads as follows:

1. A method, in a data processing system, for processing user defined Boolean variables in a multi dimensional spreadsheet (200) comprising a plurality of cells identified by a cell address along each dimension, said method comprising the steps of:
  - defining one or a plurality of Boolean variables in a table (400), whereby said Boolean variables are managed;
  - referencing said one or plurality of Boolean variables in one or a plurality of cells; and
  - determining the content of said cell or plurality of cells;wherein each of said Boolean variables can be set as "True" or "False,"

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and impact the content of a cell within an electronic spreadsheet.

Appellants respectfully submit that neither Kelly, Deitel nor the Microsoft Computer Dictionary teach or suggest to define Boolean variables in a table such that the Boolean variables can be set as "True" or "False," and impact the content of a cell within an electronic spreadsheet. Moreover, none of the cited references teach referencing one or a plurality of Boolean variables in one or a plurality of cells of an electronic spreadsheet.

Kelly teaches, on pages 174-175, the use of an "IF-THEN-OTHERWISE" function that is used to determine values for cells in a spreadsheet. The "IF-THEN-OTHERWISE" function operates in the following manner: IF a statement is true, THEN return a first value, OTHERWISE return a second value. This function in Kelly essentially states that if certain criteria are met, i.e. the statement is true, then a first value is returned, otherwise if the criteria are not met, then a second value is returned. Thus, the IF-THEN-OTHERWISE function of Kelly is merely a function to determine whether a cell will be given one value or another based on whether a condition is met. The IF-THEN-OTHERWISE function of Kelly is not a Boolean variable defined in a table. In fact, the IF-THEN-OTHERWISE function of Kelly is not a variable at all. It is a function that operates based on values of other variables included in the function. This is evident in that Kelly states that the IF-THEN-OTHERWISE function may be nested within other functions. Variables are not nested within other variables and thus, the function of Kelly is not a Boolean variable.

Furthermore, one cannot simply "set" the values of the IF-THEN-OTHERWISE function of Kelly to "True" or "False." To the contrary, the IF-THEN-OTHERWISE function of Kelly must evaluate the criteria set forth in the IF-THEN-OTHERWISE function to determine if the criteria are met or not. If met, some first value is returned. If not met, some second value is returned. This is clear from the example shown in Figure 10.23 of Kelly where the IF-THEN-OTHERWISE function takes the form of "IF(B10>90,"A", IF(B10>80),"B", IF(B10>70),"C", IF(B10>60),"D","F"))". One cannot simply set the value of this function to "A," "B," "C," "D" or any other value without deleting the function. This is because once the function is associated with the cell, it must be evaluated to determine the value of the cell. One cannot merely make the function have a certain value without modifying the variables within the function so as to achieve the desired value once the function is evaluated. Thus, the IF-THEN-OTHERWISE

function of Kelly is not a Boolean variable that is defined and managed in a table, that is referenced in a cell of a spreadsheet, and which can be set to either a value of "True" or "False."

Therefore, despite the allegations made in the Final Office Action, Kelly actually does not teach or even suggest defining one or a plurality of Boolean variables in a table, whereby the Boolean variables are managed. Since Kelly does not teach or suggest defining one or a plurality of Boolean variables in a table, Kelly also does not teach or suggest referencing such Boolean variables in cells of an electronic spreadsheet. Again, while Kelly teaches the use of an IF-THEN-OTHERWISE function that may be associated with cells of a spreadsheet, this function is not a variable, let alone a Boolean variable that is defined and managed in a table.

The Final Office Action admits that Kelly does not teach Boolean variables being defined and managed in a table. However, the Final Office Action alleges that this feature is taught by Deitel at pages 258-259 and in Figure 4.22 where Deitel teaches multidimensional arrays of integers and at page 109 where Deitel allegedly teaches representing Booleans as integers. The Final Office Action further states that the Microsoft Computer Dictionary teaches the well known use of arrays to implement tables.

At pages 258-259, Deitel teaches a way to initialize double scripted arrays in declarations in C++. While Deitel teaches a way to initialize a multidimensional array using C++, Deitel does not teach anything regarding defining Boolean variables in a table, managing those Boolean variables using the table, referencing the Boolean variables in cells of an electronic spreadsheet, or that such Boolean variables impact the content of a cell of an electronic spreadsheet. All that is taught in this section of Deitel is that an array may be initialized in C++ using the example shown in Figure 4.22.

With regard to page 109, Deitel teaches that problems occur using the operators " $\equiv$ " and " $\Rightarrow$ " because any expression that produces a value can be used in the decision portion of any control structure. If the value is 0, it is treated as false, and if the value is nonzero, it is treated as true. Therefore, if the wrong operator is used, the functionality may be very different from what is intended. There is no teaching or suggestion in this section of Deitel, or any other section of Deitel, to define and manage Boolean variables in a table, reference these Boolean variables in cells of an electronic spreadsheet, or that such Boolean variables may impact the content of a cell in an electronic spreadsheet. To the contrary, all that is taught in this section of Deitel is that problems occur using the operators " $\equiv$ " and " $\Rightarrow$ ".

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The Microsoft Computer Dictionary does not provide any additional teaching that would make the features of the presently claimed invention obvious in view of the teachings of Kelly and Deitel discussed above. Merely stating that arrays can be used to implement tables does not provide any teaching or suggestion to define Boolean variables in a table such that they may be managed and referenced in cells of an electronic spreadsheet and impact the content of cells in the electronic spreadsheet.

All that Kelly teaches is an IF-THEN-OTHERWISE function that may be used to determine the content of a cell. All that Deitel teaches is the problems that may be encountered using the operators “=” and “=.” All that the Microsoft Computer Dictionary teaches is that arrays may be used to implement tables. None of these references, whether taken alone or in combination, provide any teaching or suggestion to process user defined Boolean variables in a multi dimensional spreadsheet comprising a plurality of cells identified by a cell address along each dimension, by defining one or a plurality of Boolean variables in a table, referencing the one or plurality of Boolean variables in one or a plurality of cells, and determining the content of the cell or plurality of cells, wherein each of the Boolean variables can be set as “True” or “False,” and impact the content of a cell within an electronic spreadsheet.

In view of the above, Appellants respectfully submit that neither Kelly, Deitel, nor the Microsoft Computer Dictionary, either alone or in combination, teach or suggest the features of independent claim 1 or similar features found in claims 10 and 11. At least by virtue of their dependency on claim 1, the alleged combination of references also does not teach or suggest the features of dependent claims 2-9. Accordingly, Appellants respectfully request that the Board of Patent Appeals and Interferences overturn the rejection of claims 1-11 under 35 U.S.C. § 103(a).

In addition to the above, since none of the cited references teach or suggest defining Boolean variables in a table, managing such Boolean variables via the table, referencing the Boolean variables in cells of an electronic spreadsheet, or that such Boolean variables may impact the content of a cell in the electronic spreadsheet, the alleged combination of references cannot teach or suggest the specific features recited in dependent claims 2-9 which refer to such features. For example, the alleged combination of references cannot teach or suggest that defining one or a plurality of Boolean variables in a table includes, for each defined Boolean variable, assigning a name and storing in the table the name, selecting a status value, and storing in the table the status value, as recited in claim 2. To the contrary, the IF-THEN-OTHERWISE

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function of Kelly, which the Final Office Action equates with a Boolean variable, does not have any name or status value, and certainly does not teach that a table is utilized to store such a name and status value.

The Final Office Action admits that Kelly does not teach the features of claim 2. However, the Final Office Action alleges that Deitel teaches these features because Deitel allegedly teaches a multi-dimensional array of integers (pages 258-259, Figure 4.22), representing Boolean variables as integers (page 109), and the Microsoft Computer Dictionary teaches the use of arrays to implement tables. Each of these sections of Deitel and the Microsoft Computer Dictionary have been addressed above and shown to not provide any teaching or suggestion regarding the features of claim 1, let alone assigning a name and storing the name in the table of Boolean variables, selecting a status value, and storing the status value in the table of Boolean variables.

Similarly, with claim 3, the alleged combination of references does not teach or suggest updating, in the table, the status value of the one or plurality of Boolean variables. As discussed at length above, none of the references teaches or even suggests a table of Boolean variables that may be referenced by cells of a spreadsheet. Therefore, none of the references can be found to teach or suggest updating a status value in such a table for a Boolean variable.

The Final Office Action alleges that the features of claim 3 are taught by Deitel because Deitel allegedly teaches updating variables at page 722, Figure 14.13 and page 724, Figure 14.14. Figure 14.13 is an execution of a computer program shown in Figure 14.12. It shows the entry of the first name, last name and balance whose values may be written randomly to a random access file. There is nothing in Figure 14.13 that teaches or even suggests to update the status value of one or a plurality of Boolean variables in a table of Boolean variables associated with a spreadsheet, as recited in claim 3.

Similarly, Figure 14.14 has nothing to do with the features of the present invention as recited in claim 3. Figure 14.14 shows program code for reading a random access file sequentially. Appellants are not claiming the ability to randomly write data to a random access file or read data from a random access file sequentially. Appellants are claiming the specific spreadsheet mechanism recited in claim 3 whose features are nowhere to be found anywhere in the Deitel reference, despite the allegations made by the Examiner in the Final Office Action. Being able to write data randomly to a random access file and read data sequentially from a

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random access file does not provide any teaching or suggestion regarding the specific features recited in claim 3. Basically, the cited portions of Deitel are completely irrelevant to the claimed features.

Claim 4 recites computing the value of a cell or plurality of cells according to the value of one or a plurality of Boolean variables. Again, Kelly does not teach or suggest Boolean variables but rather the use of an IF-THEN-OTHERWISE function. Thus, Kelly does not teach or suggest the referencing of Boolean variables in cells of a spreadsheet. Moreover, Kelly does not teach computing the value of a cell based on Boolean variables referenced by the cell. To the contrary, Kelly only teaches that an IF-THEN-OTHERWISE function may be associated with a cell and may be evaluated to determine the content of the cell. As clearly shown above, an IF-THEN-OTHERWISE function is not a Boolean variable. In addition, as shown above, neither Deitel nor the Microsoft Computer Dictionary provide any teaching or suggestion to reference one or a plurality of Boolean variables in a cell or plurality of cells of a spreadsheet and to compute the value of the cell or plurality of cells according to the value of one or a plurality of Boolean variables.

Claim 5 recites changing the name in the table of one or a plurality of Boolean variables. The Final Office Action alleges that this feature is taught by Kelly at page 186, Figure 10.35 in that this figure shows a "Define Name" dialog box which can allegedly be used to assign/change a name in the "Names in workbook" text field. Page 186 of Kelly clearly states that the functionality discussed on that page is for naming a formula or a constant value using the Define Name dialog box. Kelly makes no mention what-so-ever of renaming Boolean variables in a table associated with a spreadsheet, as recited in claim 5.

Other similar types of features recited in claims 6-9, when read in combination with the features of claim 1, are also not taught by the alleged combination of references because the references do not even teach the basic elements of these claims recited in independent claim 1 from which they depend. As a result, the references cannot teach or suggest the specific features recited in these dependent claims.

In conclusion, while Kelly may generally teach the features of Excel 97, which is a spreadsheet program, nowhere in Kelly is there any teaching or suggestion regarding the specific set of features recited in the present claims. Moreover, while Deitel may generally teach principles of C++ programming, Deitel also does not teach or suggest the specific set of features

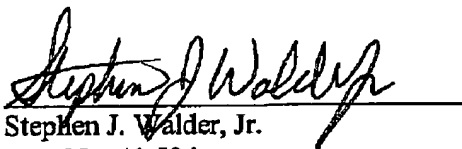


recited in the present claims and thus, does not provide for the deficiencies of Kelly. Furthermore, while the Microsoft Computer Dictionary may provide a definition for terms such as "array", "Boolean", and "cell", the Microsoft Computer Dictionary also does not provide any teaching or suggestion to include the features recited in the present claims in either of Kelly or Deitel. Thus, since all of the references are deficient with regard to the features of the present claims, any combination of these references, assuming such a combination were even possible and one were motivated to make such a combination, would still fall well short of obviating the present invention as recited in claims 1-11. In view of the above, Appellants respectfully request that the Board of Patent Appeals and Interferences overturn the rejections of claims 1-11 under 35 U.S.C. § 103(a).

#### **VIII. Conclusion**

In view of the above, Appellants respectfully submit that claims 1-11 of the present application are directed to statutory subject matter and that the features of these claims are not taught or suggested by the alleged combination of Kelly, Deitel and the Microsoft Computer Dictionary references. Accordingly, Appellants request that the Board of Patent Appeals and Interferences overturn the rejections set forth in the Final Office Action.

Respectfully submitted,



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**CLAIMS APPENDIX**

1. A method, implemented on a computer system, for processing user defined Boolean variables in a multi dimensional spreadsheet (200) comprising a plurality of cells identified by a cell address along each dimension, said method comprising the steps of:

defining one or a plurality of Boolean variables in a table (400), whereby said Boolean variables are managed;

referencing said one or plurality of Boolean variables in one or a plurality of cells; and

determining the content of said cell or plurality of cells;

wherein each of said Boolean variables can be set as "True" or "False," and impact the content of a cell within an electronic spreadsheet.

2. The method according to claim 1 wherein said step of defining one or a plurality of Boolean variables in a table, comprises the further steps of:

for each defined Boolean variable:

assigning a name (311) and storing in the table (400) said name (403);

selecting a status value (303); and

storing in the table said status value (404).

3. The method according to claim 1 further comprising:

updating in the table the status value (304, 404) of the one or plurality of Boolean variables.

4. The method according to claim 1 wherein the step of determining the content of said cell or plurality of cells comprises the further step of:

computing the value of said cell or plurality of cells according to the value of said one or plurality of Boolean variables.

5. The method according to claim 1 comprising the further step of:

changing in the table (400) the name (311) of one or a plurality of Boolean variables.

6. The method according to claim 1 wherein said step of selecting a status value (303) comprises the further steps of:

setting the status value of the Boolean variable to "true"; or

setting the status value of the Boolean variables to "false."

7. The method according to claim 1 comprising the further step of:

setting the value of the Boolean variable to one when the status value is "true"; or

setting the value of the Boolean variable to zero when the status value is "false."

8. The method according to claim 1 wherein said steps of assigning a name, changing the name, selecting a status value, updating the status value are executed by means of an interactive user interface.

9. The method according to claim 8 wherein said interactive user interface comprises a dialog box (300) displayed on a screen (106) of a computer system (100).

10. A computer system (100) comprising  
means for defining one or a plurality of Boolean variables in a table, whereby said  
Boolean variables are managed;  
means for referencing said one or plurality of Boolean variables in one or a plurality of  
cells; and  
means for determining the content of said cell or plurality of cells;  
wherein each of said Boolean variables can be set as "True" or "False," and impact the  
content of a cell within an electronic spreadsheet.
11. A computer-usable medium comprising computer readable instructions adapted for  
carrying out the method according to claim 1.

**EVIDENCE APPENDIX**

NONE

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**RELATED PROCEEDINGS APPENDIX**

NONE

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